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P#18

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Richard A. Young

Application No.: 09/756,543

Group Art Unit: 1644

Filed: January 8, 2001

Examiner: M.A. Belyavskiy

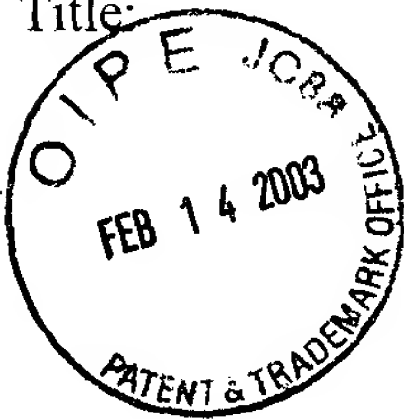
Confirmation No.: 6739

Title: Use of Heat Shock Proteins to Deliver Moieties Into Cells

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CERTIFICATE OF MAILING	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202	
on <u>2-11-03</u>	<u>Jenine Crump</u>
Date	Signature
<u>Jenine Crump</u>	
Typed or printed name of person signing certificate	

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22202

Sir:

This Information Disclosure Statement is submitted:

☐ under 37 CFR 1.129(a), or

(First/Second submission after Final Rejection)

☒ under 37 CFR 1.97(b), or

(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).

☐ under 37 CFR 1.97(c) together with either:

☐ a Statement under 37 CFR 1.97(e), as checked below, or

☐ a \$180.00 fee under 37 CFR 1.17(p), or

(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with:

☐ a Statement under 37 CFR 1.97(e), as checked below, and

☐ a \$180.00 fee under 37 CFR 1.17(p), or

(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)

☐ under 37 CFR 1.97(i):

Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.

(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

- ☒ Enclosed herewith is form PTO-1449:

- ☒ Copies of the cited references are enclosed (AI-AK; AA2-AB2; AM5; AT13-AZ13; AR14-AZ14 and AR15-AY15).
- ☐ Copies of cited references are enclosed except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]
- ☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
- ☐ The "concise explanation" requirement (non-English references) for reference(s) [ ] under 37 CFR 1.98(a)(3) is satisfied by:
- ☐ the explanation provided on the attached sheet.
  - ☐ the explanation provided in the Specification.
  - ☐ submission of the enclosed International Search Report.
  - ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
  - ☐ the enclosed English language abstract.

☐ Applicant requests that the following non-published pending applications be considered:

Examiner's  
Initials

\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]  
 \_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]  
 \_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

\_\_\_\_\_  
Examiner

\_\_\_\_\_  
Date

- ☐ A copy of each above-cited application, including the current claims, is enclosed.
- ☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

- ☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.
- ☐ Please charge Deposit Account 08-0380 in the amount of \$[ ]. A copy of this Statement is enclosed.
- ☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

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Dated: February 11, 2003

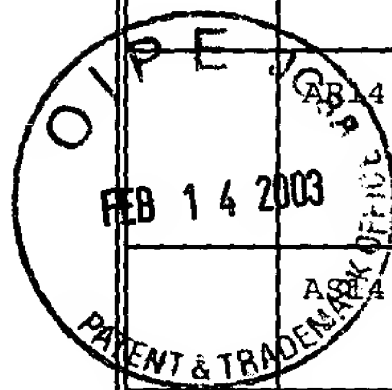
PTO-1449 REPRODUCED		ATTORNEY DOCKET NO. 0399.1185-006		APPLICATION NO. 09/756,543	
<b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  <b>February 11, 2003</b>  (Use several sheets if necessary)		APPLICANT Richard A. Young			
		FILING DATE January 8, 2001		<b>RECEIVED</b> CONFIRMATION NO. 6739 GROUP 1644	
U.S. PATENT DOCUMENTS					
FEB 19 2003					
EXAM- INER INI- TIAL		DOCUMENT NUMBER	ISSUE DATE / PUBLICATION DATE	TECH CENTER 1600/2900	
	AI	6,482,614	19-Nov-2002	Young	
	AJ	4,557,931	03-Dec-1985	Irie, et al.	
	AK	6,030,618	29-Feb-2000	Srivastava	
	AA2	6,455,493 B1	24-Sep-2002	Wallen, et al.	
	AB2	6,403,099 B1	11-Jun-2002	Rappuoli, et al.	
	AC2				
	AD2				
FOREIGN PATENT DOCUMENTS					
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS
	AM5	WO 01/51081 A1	19-JUL-2001	PCT	
	AN5				
	AO5				
	AP5				
	AQ5				
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
	AT13	Roman, E., et al., "Synthetic Peptides non-Covalently Bound to Bacterial hsp 70 Elicit Peptide-Specific T-Cell Responses in vivo," Immunology 88:487-492 (1996)			
	AU13	Geluk, A., et al., "Functional Analysis of DR17(DR3)-Restricted Mycobacterial T Cell Epitopes Reveals DR17-Binding Motif and Enables The Design of Allele-Specific Competitor Peptides," J. Immunology 149 (9):2864-2871 (November 1, 1992)			
	AV13	Ciupitu, A.T., et al., "Immunization with a Lymphocytic Choriomeningitis Virus Peptide Mixed with Heat Shock Protein 70 Results in Protective Antiviral Immunity and Specific Cytotoxic T Lymphocytes," J. Exp. Med. 187 (5):685-691 (March 2, 1998)			
	AW13	Horwitz, M.A., et al., "Protective Immunity Against Tuberculosis Induced by Vaccination With Major Extracellular Proteins of Mycobacterium tuberculosis," Microbiology 92:1530-1534 (February 1995)			
	AX13	Matthews, R.C., et al., "Autoantibody to Heat-Shock Protein 90 Can Mediate Protection Against Systemic Candidosis," Immunology 74:20-24 (1991)			
EXAMINER			DATE CONSIDERED		

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			GROUP 1644
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
AY13	Gelber, R.H., et al., "Vaccination With Pure <i>Mycobacterium leprae</i> Proteins Inhibits <i>M. leprae</i> Multiplication in Mouse Footpads," <i>Infection and Immunity</i> 62(10):4250-4255 (October 1994)		
AZ13	Breloer, M., et al., "In Vivo and In Vitro Activation of T Cells After Administration of Ag-Negative Heat Shock Proteins," <i>J. Immunol.</i> 161:3141-3147 (1999)		
AS14	Multhoff, G., et al., "The Role of Heat Shock Proteins in the Stimulation of an Immune Response," <i>Biol. Chem.</i> 379:295-300 (March 1998)		
AS14	Chen, W., et al., "Human 60-kDa Heat-Shock Protein: A Danger Signal to the Innate Immune System," <i>J. Immunol.</i> 162:3212-3219 (1999)		
AT14	Lehner, T., et al., "Heat Shock Proteins Generate $\beta$ -Chemokines Which Function as Innate Adjuvants Enhancing Adaptive Immunity," <i>Eur. J. Immunol.</i> 30:594-603 (2000)		
AU14	Grange, J.M., et al., "Tuberculosis and Cancer: Parallels in Host Responses and Therapeutic Approaches?," <i>The Lancet</i> 345:1350-1352 (1995)		
AV14	Amadori, M., et al., "Chaperonin 10 of <i>Mycobacterium tuberculosis</i> Induces a Protective Immune Response to Foot-and-Mouth Disease Virus," <i>Arch Virol.</i> 144:905-919 (1999)		
AW14	Dintzis, R.Z., "Rational Design of Conjugate Vaccines," <i>Pediatric Research</i> 32(4):376-385 (1992)		
AX14	Delmas, A., et al., "Studies of the Influence of Different Cross-Linking Reagents on the Immune Response against a B-Epitope," <i>Bioconjugate Chemistry</i> 3(1):80-84 (1992)		
AY14	Babbitt, et al., "Binding of Immunogenic Peptides to Ia Histocompatibility Molecules," <i>Nature</i> 317:359-361 (1985)		
AZ14	Brett, et al., "Differential Pattern of T Cell Recognition of the 65-kDA Mycobacterial Antigen Following Immunization with the Whole Protein or Peptides," <i>Euro. J. Immunol.</i> 19:1303-1310 (1989)		
AR15	Cox, et al., "Orientation of Epitopes Influences the Immunogenicity of Synthetic Peptide Dimers," <i>Euro. J. Immunol.</i> 18:2015-2019 (1988)		
AS15	Engel, et al., "Generation of Antibodies Against Human hsp27 and Murine hsp25 by Immunization with a Chimeric Small Heat Shock Protein," <i>Biomed. Biochim. Acta</i> 50:1065-1071 (1991)		
AT15	Francis, et al., "Peptide Vaccines Based on Enhanced Immunogenicity of Peptide Epitopes Presented with T-Cell Determinants or Hepatitis B Core Protein," <i>Meth. Enzymol.</i> 178:659-676 (1989)		
AU15	Fyfe, et al., "Murine Immune Response to HIV-1 p24 Core Protein Following Subcutaneous, Intraperitoneal and Intravenous Immunization," <i>Immunology</i> 74:467-472 (1991)		
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
	AV15	Myers, "Role of B Cell Antigen Processing and Presentation in the Humoral Immune Response," FASEB J. 5:2547-2553 (1991)			
	AW15	Parker, "T-Cell Dependent B Cell Activation," Annu. Rev. Immunol. 11:331-360 (1993)			
	AX15	Townsend, et al., "Antigen Recognition by Class I-Restricted T Lymphocytes," Ann. Rev. Immunol. 7:601-624 (1989)			
	AY15	Yewdell, et al., "The Binary Logic of Antigen Processing and Presentation to T Cells," Cell 62:203-206 (1990)			
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